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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,489	08/31/2000	Youqi Wang	SMX 3083.1	3644
321	7590	03/10/2004	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			QUAN, ELIZABETH S	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/652,489	Applicant(s) WANG ET AL.	
	Examiner Elizabeth Quan	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12,14-18,24-51 and 53-63 is/are pending in the application.
- 4a) Of the above claim(s) 18,30,37 and 42-49 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51 is/are allowed.
- 6) ☒ Claim(s) 12,17,24,29,31,36,38,41,50,59 and 60 is/are rejected.
- 7) ☒ Claim(s) 14-16,25-28,32-35,39,40,53-58 and 61-63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12, 17, 24, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,705,616 to Andresen et al.

Andresen et al. disclose a sampling probe (33) for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer for analysis. The preamble, which recites the probe **for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer**, has been construed as intended use (see MPEP 2111.02). A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the prior art sampling probe does not have to be for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer for analysis since the prior art sampling probe has all the recited structural limitations and is capable of performing the intended use.

The probe (33) has an inner body and an outer body with an inner cavity sized and shaped for receiving the inner body (see FIG. 6). The inner body has an upper portion fixed relative to the outer body (see FIG. 6). The probe (33) has a tip (73) for engaging the substrate (see FIG. 6). Method limitations are accorded no patentable weight in apparatus claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the tip does not have to engage the substrate since the prior art sampling probe has all the recited structural limitations, including the tip, which is capable of performing the intended use of engaging with the substrate.

A resiliently compliant element as characterized by molecular screen (74) between washers (75) connects the tip to the inner body for permitting the tip to move relative to the inner body (see FIG. 6; COL. 11, lines 48-68; COL. 12, lines 1-4). The tip has a recess sized and shaped for receiving at least a portion of the reaction product (see FIG. 6). A reactant delivery passage (36,37) extends through the probe to an outlet at the tip for delivering reactant to the substance on the substrate to form the reaction product (see FIG. 6). Method limitations are accorded no patentable weight in apparatus claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the tip does not have to deliver reactant to the substance on the substrate to form the reaction product since the prior art sampling probe has all the recited structural

limitations, including the reactant delivery passage, which is capable of performing the intended use.

A reaction product sampling passage (55) extends from the recess of the tip adapted for connection to the product analyzer, the spectrometer, for transporting at least the portion of the reaction product to the product analyzer (see FIG. 6; COL. 12, lines 31-42).

3. Claims 38, 41 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,959,297 to Weinberg et al.

Weinberg et al. disclose a sampling probe capable of delivering a reactant to a substance deposited on a substrate to form a reaction product and for transporting the reaction product to a product analyzer for analysis (see FIGS. 8-10). The probe comprises an inner body and an outer body having an inner cavity sized and shaped for receiving the inner body (see FIGS. 8-10). The inner body includes a tip with a recess for engaging the substrate and receiving a portion of the reaction product (see FIGS. 8-10; COL. 15, lines 30-67). A reactant delivery passage (904,902) extends through the probe to an outlet at the tip for delivering reactant to the substance on the substrate to form the reaction product (see FIGS. 8-10; COL. 15, lines 30-67). Since reactants are delivered through two passages (904,902), the junction of the two passages (904,902) is the mixing chamber in which the reactants mingle. A product sampling passage (906) extends from the recess adapted for connection to the scanning mass spectrometer for transporting at least the portion of the reaction product to the scanning mass spectrometer (see FIGS. 8-10; COL. 15, lines 30-67). The tip has at least one opening provided by conduit (806) that is separate from the sampling passage (906) to permit reactants to flow from the exterior of the tip into the recess when the tip contacts the substrate (see FIGS 8-10). The conduit (806) is separate from conduit

(906) such that the passage within the conduit never meets the opening provided by the conduit (806) (see FIGS. 8-10). They are kept separate since the walls of the conduit (906) keep the passage of the conduit from the passage of conduit (806) (see FIGS. 8-10). An overflow vent or a vent passage (1004) extends through the outer body from an inlet (908) positioned outside the recess of the tip for removing reactant from an area outside the recess (see FIGS. 8-10; COL. 15, lines 30-67). A cover is mounted on the body covering the plug and forming an upper recess between the cover and lower end face of the plug, since reactants flow through the cover and plug from a reactant source (see FIGS. 8-10). There is a barrier surrounding the tip and disposed outside the annular recess to inhibit contamination of adjacent substances on the substrate (see FIGS. 9 and 10).

4. Claims 12, 17, 24, 29, 59, 60 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,408,125 to Meuzelaar.

Meuzelaar discloses a sampling probe (10) for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer for analysis. The preamble, which recites the probe **for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer**, has been construed as intended use (see MPEP 2111.02). A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the prior art sampling probe does not have to be for delivering a reactant to a substance deposited on a substrate to form a

reaction product and transporting the reaction product to a product analyzer for analysis since the prior art sampling probe has all the recited structural limitations and is capable of performing the intended use.

The probe (10) has an inner body and an outer body with an inner cavity sized and shaped for receiving the inner body (see FIG. 2). The inner body has an upper portion fixed relative to the outer body (see FIG. 2). The probe (10) has a tip (100) for engaging the substrate (see FIG. 2). Method limitations are accorded no patentable weight in apparatus claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the tip does not have to engage the substrate since the prior art sampling probe has all the recited structural limitations, including the tip, which is capable of performing the intended use of engaging with the substrate.

A resiliently compliant element (92) connects the tip to the inner body for permitting the tip to move relative to the inner body (see FIG. 2). The tip has a recess sized and shaped for receiving at least a portion of the reaction product (see FIG. 2). A reactant delivery passage (80) extends through the probe to an outlet at the tip for delivering reactant to the substance on the substrate to form the reaction product (see FIG. 2). A reactant is delivered through passage (80) via the help of a wire (col. 6, lines 19-50). Method limitations are accorded no patentable weight in apparatus claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim

covers what a device is, not what a device does (see MPEP 2114). In this case the tip does not have to deliver reactant to the substance on the substrate to form the reaction product since the prior art sampling probe has all the recited structural limitations, including the reactant delivery passage, which is capable of performing the intended use.

A reaction product sampling passage (102) extends from the recess and adapted for connection to the product analyzer, the spectrometer, for transporting at least the portion of the reaction product to the product analyzer (see FIG. 6; COL. 12, lines 31-42). A heater (94,96) is inside the probe for heating the reactant (see FIG. 2; COL. 6, lines 51-68; COL. 7, lines 1-32).

5. Claims 31, 36 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,408,125 to Meuzelaar.

Meuzelaar discloses a sampling probe (10) for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer for analysis. The preamble, which recites the probe **for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer**, has been construed as intended use (see MPEP 2111.02). A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the prior art sampling probe does not have to be for delivering a reactant to a substance deposited on a substrate to form a reaction product and transporting the reaction product to a product analyzer for analysis since the

prior art sampling probe has all the recited structural limitations and is capable of performing the intended use.

The probe (10) has an inner body and an outer body with an inner cavity sized and shaped for receiving the inner body (see FIG. 2). The inner body has an upper portion fixed relative to the outer body (see FIG. 2). The probe (10) has a tip defined by walls (42) for engaging the substrate (see FIG. 2). The tip includes at least one opening (56a-d) separate from the sampling passage. Method limitations are accorded no patentable weight in apparatus claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the tip does not have to engage the substrate since the prior art sampling probe has all the recited structural limitations, including the tip, which is capable of performing the intended use of engaging with the substrate.

A resiliently compliant element (92) connects the tip to the inner body for permitting the tip to move relative to the inner body (see FIG. 2). The tip has a recess sized and shaped for receiving at least a portion of the reaction product (see FIG. 2). A reactant delivery passage (80) extends through the probe to an outlet (108) positioned at an exterior of the tip for delivering reactant to the substance on the substrate to form the reaction product (see FIG. 2). A reactant is delivered through passage (80) via the help of a wire (col. 6, lines 19-50). Method limitations are accorded no patentable weight in apparatus claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations

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of the claim. An apparatus claim covers what a device is, not what a device does (see MPEP 2114). In this case the tip does not have to deliver reactant to the substance on the substrate to form the reaction product since the prior art sampling probe has all the recited structural limitations, including the reactant delivery passage, which is capable of performing the intended use.

A reaction product sampling passage (102) extends from the recess and adapted for connection to the product analyzer, the spectrometer, for transporting at least the portion of the reaction product to the product analyzer (see FIG. 6; COL. 12, lines 31-42). A heater (94,96) is inside the probe for heating the reactant (see FIG. 2; COL. 6, lines 51-68; COL. 7, lines 1-32).

Allowable Subject Matter

6. Claims 14-16, 25-28, 32-35, 39, 40, 53-58, 61-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim 51 is allowed.

Response to Arguments

8. Examiner acknowledges the informal telephone correspondence with the Attorney. Examiner prepared clarification of the rejections by answering Attorney's questions to the best of her ability and welcomed any further questions the Attorney might have. Examiner did not ask for a request for reconsideration.

9. Rejection of claim 15 over Andresen has been withdrawn. Rejection of claims 32, 51, and 53 over Meuzelaar has been withdrawn.

10. Applicant's arguments, see page 20, filed 12/19/2003, with respect to claims 51-57 have been fully considered and are persuasive. The rejection of claims 51-57 over Weinberg has been withdrawn. Previously, claim 50 was inadvertently rejected over Weinberg.

11. Applicant's arguments, see page 12, filed 12/19/2003, with respect to claims 31, 54 have been fully considered and are persuasive. The rejection of claims 31, 54 over 112 issues has been withdrawn. Previously, claim 54 was inadvertently rejected over 112 issues.

12. Applicant's arguments, see page 21, filed 12/19/2003, with respect to claims 31, 50 have been fully considered and are persuasive. The rejection of claims 31, 50 over Beer has been withdrawn.

13. Applicant's arguments filed 12/19/2003 have been fully considered but they are not persuasive.

a. Applicant argues that Andresen fails to show a resiliently compliant element connecting the tip and inner body.

b. Examiner maintains that the screen (74) between two washers (75) is the resiliently compliant element, which connects the tip (73) to the inner body, which is positioned above the resiliently compliant element. The product sampling passage (55) extends from the recess of the tip and is adapted for transporting at least the portion of the reaction product to the product analyzer.

c. Applicant argues that Meuzelaar does not show or suggest the claimed reactant delivery passage extending through the probe to an outlet at the tip.

- d. Examiner maintains that the reactant delivery passage (80) extends through the probe to an outlet at the tip (100) to enter the reactant product sampling passage (102), which can be connected to a product analyzer.
- e. Applicant argues that Weinberg's overflow vent passage does not remove excess reactant before the excess reactant reaches the outlet for optimizing contact time between the reactant and substance.
- f. Examiner notes that Applicant admits that there is an overflow vent passage. The limitation of "remove excess reactant before the excess reactant reaches the outlet for optimizing contact time between the reactant and substance" is considered intended use. Furthermore, the overflow vent passage is capable of removing excess reactant before the excess reactant reaches the outlet for optimizing contact time between the reactant and substance. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (571) 272-1261. The examiner can normally be reached on M-F (8:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elizabeth Quan
Examiner
Art Unit 1743

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